BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In The Matter of	)	
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Preparation for International Telecommunication Union World Radiocommunication Conferences	)	**IC Docket No. 94-31**

To: The Commission

REPLY COMMENTS OF THE AMERICAN PETROLEUM INSTITUTE

The American Petroleum Institute ("API"), by its attorneys and pursuant to Section 1.415 of the Rules and Regulations of the Federal Communications Commission ("Commission" or "FCC"), hereby respectfully submits these Reply Comments concerning the Second Notice of Inquiry (Notice) released by the Commission on January 31, 1995 that sets forth the Commission's preliminary proposals for international allocations of spectrum at the 1995 World Radiocommunication Conference (WRC-95).[1/]

1/ 60 Fed. Reg. 8994 (February 16, 1995). The date for filing Reply Comments in this proceeding was extended to April 14, 1995. 60 Fed. Reg. 15527 (March 24, 1995).

REPLY COMMENTS

1. API is a national trade association representing approximately 300 companies involved in all phases of the petroleum and natural gas industries, including exploration, production, refining, marketing, and transportation of petroleum, petroleum products and natural gas. Among its many activities, API acts on behalf of its members as spokesperson before federal and state regulatory agencies. The API Telecommunications Committee is one of the standing committees of the organization's Information Systems Committee. The Telecommunications Committee evaluates and develops responses to state and federal proposals affecting telecommunications facilities used in the oil and gas industries.

2. API's Telecommunications Committee is supported and sustained by licensees that are authorized by the Commission to operate, among other telecommunications facilities, point-to-point and point-to-multipoint systems in the Private Operational-Fixed Microwave Service ("POFS") that is governed by Part 94 of the Rules and Regulations. These telecommunications facilities are used to support the search for and production of oil and natural gas. Such systems are also utilized to ensure the safe pipeline

transmission of natural gas, crude oil and refined petroleum products, and for the processing and refining of these energy sources, as well as for their ultimate delivery to industrial, commercial, and residential customers. The facilities licensed to API's members are therefore essential to the provision of our nation's energy sources.

3. API's members utilize POFS systems to serve a variety of vital point-to-point and point-to-multipoint telecommunications requirements, including communications between remote oil and gas exploration and production sites, for supervisory control and data acquisition (SCADA) systems, to communicate with refineries, and to extend circuits to remote pipeline pump and compressor stations. The oil and gas industries were among the pioneers in the development of private microwave, utilizing their systems to monitor and operate petroleum and natural gas pipelines.

4. Accordingly, the API Telecommunications Committee participated in the Commission's earliest rule making proceeding that addressed private microwave use of the spectrum; and it has continued to be an active participant in every subsequent major proceeding affecting the POFS. Consistent with this active involvement in telecommunications regulatory issues, the API

Telecommunications Committee participated in nearly every phase of the Commission's Docket Nos. 90-314 and 92-9 that led to the reallocation of spectrum in the 2 GHz range for emerging technologies, including Personal Communications Service ("PCS"), and to the adoption of reaccommodation provisions for those POFS licensees required to vacate their assignments.

5. As a result of the consistent efforts of API and others, the Commission provided that incumbent POFS licensees utilizing assignments from the frequency band 1850-1990 MHz that are displaced by PCS licensees may relocate their POFS systems to the 6 GHz, 11 GHz and 18 GHz bands. Specifically, the Commission provided for relocation of existing 2 GHz licensees to the 5.925-6.425 GHz (lower 6 GHz), 6.525-6.875 GHz (upper 6 GHz), 10.7-11.7 GHz (11 GHz) and 17.7-19.7 GHz (18 GHz) bands.[2/] These POFS incumbents will give up valuable, established systems -- many with essential long haul narrowband capabilities. Most of these systems have not yet been relocated by these users. Furthermore, in the 6 GHz, 11 GHz and 18 GHz bands made available to POFS, terrestrial users already share the allocations with Fixed Satellite Services (FSS). This

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[2/] Second Report and Order, ET Docket No. 92-9 (August 13, 1993) at 6497.

sharing with FSS is possible due to the fact that the FSS uplinks and downlinks remain in the same fixed location, permitting the coordination of both terrestrial and satellite users.

6. In its recent Notice in this matter, the Commission discussed proposals to permit MSS operations in the frequency bands 6.825-7.075 GHz, 10.7-10.95 GHz, 11.45-11.7 GHz and 18.9-19.7 GHz.[3/] API is astonished by the suggestion that such sharing could be safely accomplished in the very same bands the Commission so recently designated for relocated POFS systems.

7. MSS systems operating in the 6 GHz, 11 GHz and 18 GHz bands would cause ruinous levels of interference to POFS systems operating in the same bands. Unlike FSS satellites, non-synchronous satellites present inherent threats to POFS. Signals transmitted from non-synchronous satellites are received on earth at a much higher level since the satellites are much closer. While non-synchronous satellites do not always need to transmit as much power as FSS satellites in order to be effective, unlike FSS satellites, non-synchronous satellites can appear

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3/ Second Notice of Inquiry, IC Docket No. 94-31 (January 31, 1995), Preliminary Proposal No. 1/FL-MSS.

at various points in the sky, including near the horizon. Therefore, the amount of power from a non-synchronous satellite required to cause destructive interference to POFS is potentially quite small. Clearly, the reliability of POFS could be significantly damaged by MSS feederlink EIRP's of 1 watt or less. The Commission's preliminary proposal to permit MSS to share this spectrum with POFS could effectively force POFS out of these bands.

8. API urges the Commission to respect the letter and spirit of its PCS reallocation proceeding and to allow POFS to operate, as promised, in the 6 GHz, 11 GHz and 18 GHz bands without undue interference from MSS. API submits that the Commission should permit POFS to continue to share the 6 GHz, 11 GHz and 18 GHz bands with FSS, but the Commission should not recommend international allocation of these bands for MSS.

9. By indicating that NGSO MSS sharing may be feasible in the upper and lower 6 GHz bands, Table 2 of the Notice relies upon the Interim Report of the Informal Working Group-4 (IWG-4) for the FCC Industry Advisory Committee (IAC).[4/] That IAC Interim Report concluded that

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4/ Notice at notes 80, 83.

sharing is not feasible between NGSO MSS and Fixed Satellite Services in the upper and lower 6 GHz bands on a co-directional basis and that bidirectional sharing would be difficult and subject to severe limitations.[5/] The Commission in Table 2 states that sharing between NGSO MSS and Fixed Services is feasible on a bidirectional basis, despite the fact that the IAC Interim Report failed to include Fixed Services in its analysis of the sharing implications for the upper and lower 6 GHz bands.[6/] The IAC's pending Final Report, the IAC's revised Interim Report, and the Conference Preparatory Meeting (CPM) for WRC-95 Report all acknowledge that the ITU-R study relied upon by the IAC Interim Report to determine the feasibility of NGSO MSS and FS sharing "**addressed bands above 10 GHz only** . . ."[7/] In light of the fact that the Commission's

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5/ IAC Interim Report at 24.

6/ IAC Interim Report, "FSS Bands to be Further Considered by IWG-4 for NGSO Feeder Link Proposals for WRC-95" (December 21, 1994) at 24.

7/ Draft, IAC Final Report to IWG-4 (April 13, 1995) at 13; Draft Revisions to IAC Interim Report to IWG-4 (April 13, 1995) at § 4.3.1, and CPM Report to WRC-95 (April 4, 1995) at 53, 55. In fact, the CPM Report specifically states that "Recommendation ITU-R SF.1005 is limited to frequency bands above 10 GHz because most bands below 10 GHz are heavily used by the FS." CPM Report at 56. The study (ITU-R SF.1005) which is relied upon by the IAC in its Interim Report to IWG-4 and its pending revised Interim Report to IWG-4, "deals only with GSO/FSS." CPM Report at 56.

preliminary proposal to permit sharing between NGSO MSS and FS in the 6 GHz band is based on an ITU-R study which did not examine bands below 10 GHz and which did not include Fixed Services, API submits that this preliminary proposal is, at best, premature and, at worst, fatally flawed. The CPM Report concludes that sharing between NGSO MSS and FS is only feasible "in those bands not densely occupied by the FS."[8/] While the density of FS may be small in those bands above 10 GHz studied by the ITU-R, the density of FS below 10 GHz is heavy and growing larger, particularly in the 6 GHz bands that have been designated for POFS systems displaced from the 2 GHz bands.

10. In addition, the Commission's Notice fails to clearly address whether the bands listed in Table 2 are formal proposals to be put forth by the Commission, and thus an addendum to Table 5 of the Notice (which is entitled "Candidate Bands for Worldwide MSS Spectrum Allocations"),

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8/ CPM Report at 56, 61. The CPM Report also notes that the feasibility of sharing would depend on the density of existing fixed systems and the number of NGSO MSS feeder link earth stations. CPM Report at 54. Both the CPM and the IAC acknowledge that NGSO MSS sharing with FS is only potentially feasible "in bands which are lightly occupied by FS." CPM Report at 54; Draft, IAC Final Report to IWG-4 at 13. API stresses to the Commission that the 6 GHz bands are not lightly occupied by FS, rather, the 6 GHz bands are heavily occupied by FS and the number of FS relocating from 2 GHz to 6 GHz will continue to increase.

or whether these proposals are preliminary talking points put forth by the many study groups and Commenters involved in this proceeding. In either case, API objects to the equivocal nature of this proposition, and requests that the Commission firmly state its intention in this proceeding and all future proceedings where the rights of parties could be so fundamentally altered through domestic and international spectrum allocations. In light of the circuitous nature of the Commission's proposal, API believes that many private microwave users are not even aware of the existence of a proposal to subject them to ruinous interference from MSS in spectrum which was so recently rededicated for POFS use.

WHEREFORE, THE PREMISES CONSIDERED, the American Petroleum Institute respectfully submits the foregoing Reply

Comments and requests the Federal Communications Commission take action in a manner consistent with the views expressed herein.

Respectfully submitted,

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